

DOH-Hillsborough County COVID-19 Surveillance Report

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SUMMARY: Over the past week (1/3 – 1/9), 6,437 COVID cases were identified in Hillsborough County, an increase of 15% from 5,587 during the previous week. The 7-day moving **average of cases per day is now at 920**. The 7-day moving average of **percent positivity (13.9%) decreased slightly** from the previous week. Case rates increased across every age group and **case rates are highest in the 45-54 age group**. Rates increased in all race/ethnicities during week 49, and **case rate was highest in Hispanics**. Case rates are **increasing Statewide and in all Tampa Bay area counties**. During the past week in Hillsborough County, **testing rate has increased slightly**. Pinellas County is experiencing higher testing per 100,000 residents compared to Pasco and Hillsborough. Antigen testing results are now being reported on average within the same day and PCR testing turnaround time has stayed consistent at around 2 days. Hillsborough County **hospitalizations for COVID continue to increase** and are now averaging 462 total COVID inpatients a day, up 16% from last week. Hillsborough County has **administered 26,777 doses of COVID-19 vaccine, representing 1.9% of the county population**.

INFLUENZA/RESPIRATORY SURVEILLANCE: Influenza activity remains extremely low throughout Hillsborough County and the State. No outbreaks of Influenza or other respiratory pathogens have been reported this influenza season. Very few positive influenza labs have been received and no pediatric mortalities have been reported. Additional information and data about influenza surveillance is available at: <http://www.floridahealth.gov/diseases-and-conditions/influenza/>

Fig 1. Daily New COVID cases and percent positivity trends in Hillsborough County Residents. The **7-day moving average for percent positivity decreased slightly and is now 13.9%**. The **7-day average number of new cases per day (920) increased this past week and surpassed the previous high (798) seen during the previous week**. Hillsborough County has reported 86,509 cases to date.

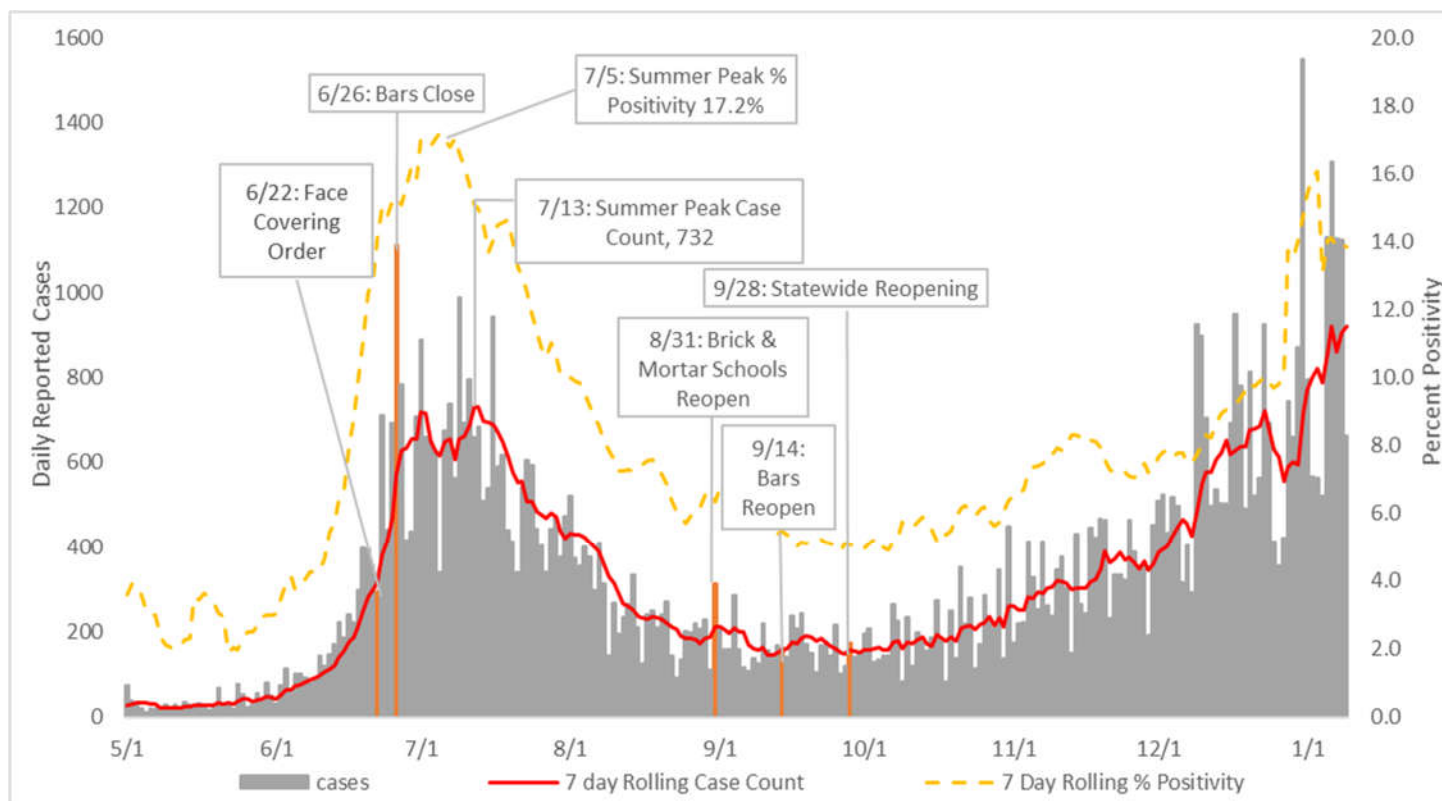
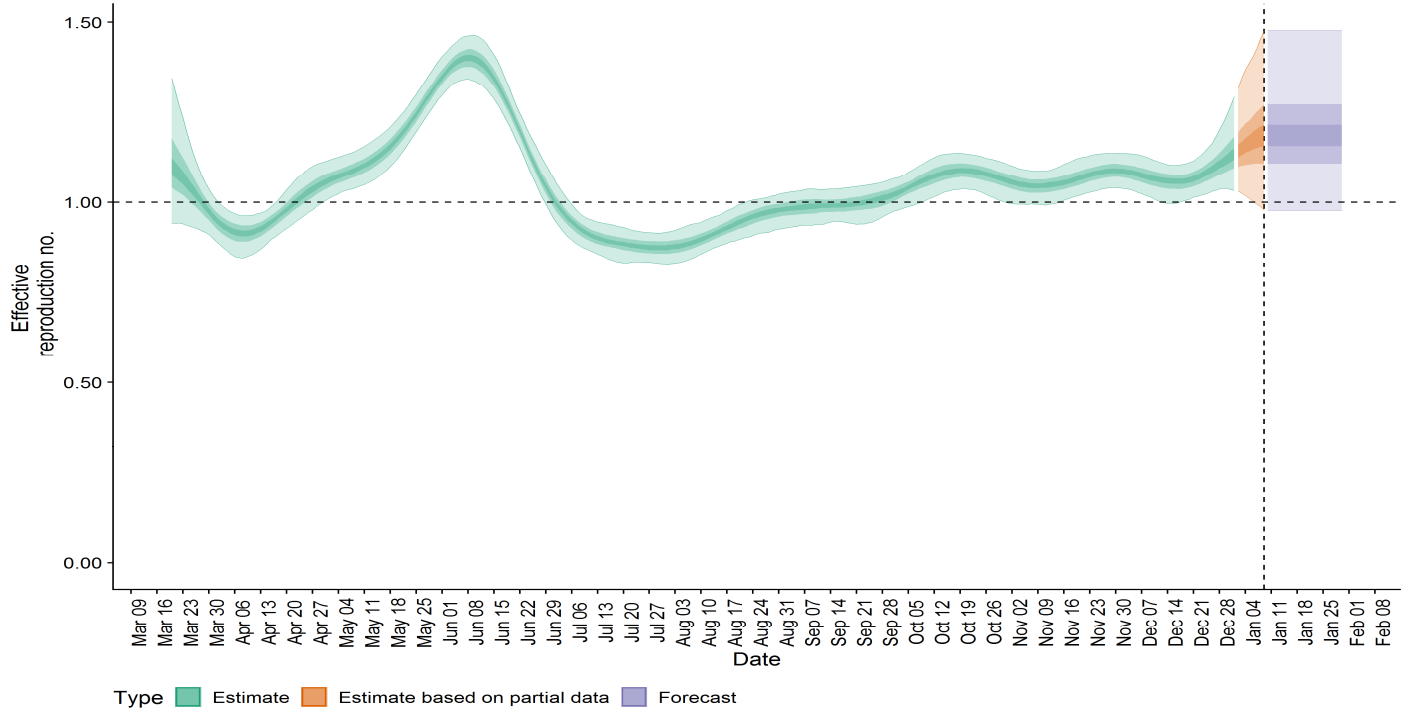


Fig 2 (below). R_t median estimate for Hillsborough County since March 2020. R_t estimate is calculated based on “nowcasted” new case rates (incidence). Nowcasted refers to the fact that the incidence data has been corrected for the disease progression, reporting delays and observation error. Figure 2 includes the historical R_t median estimates (green), the past weeks nowcasted R_t median estimate based on partial data (orange) and the next 21 days forecasted R_t median estimate (purple). The colors, from darkest to lightest, indicate 20%, 50% and 90% credible intervals (CI), respectively. An R_t above 1.0 means the outbreak is growing – or viewed another way, one person is infecting more than one additional person – and R_t below 1.0 means that outbreak is shrinking. **The current estimate of R_t for Hillsborough County is 1.20 (90% CI = 0.98-1.48)** an increase from last week where the estimate was 1.12 (90% CI = 0.95-1.19).



CASES, CASE RATES AND GROUP SETTINGS

Fig 3. Comparison of COVID 7-day average case rate per 100,000 population for Pinellas, Pasco and Hillsborough Counties and the State of Florida for the past 90 days. All three **Tampa Bay Area counties increased in case rates** over the past week. The **Florida case rate also increased** and is now 72.9 cases per 100,000.

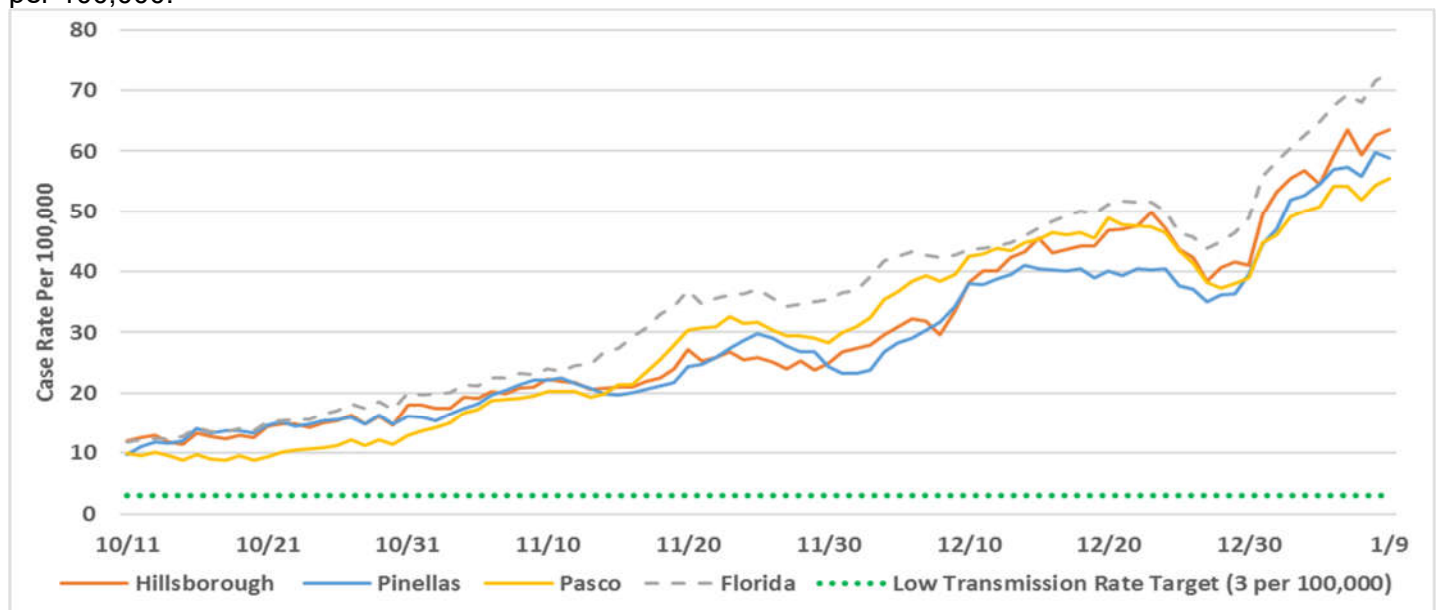


Fig 4. Comparison of COVID 7-day average case rate per 100,000 population by race and ethnicity for the past 90 days in Hillsborough County. Population data was acquired from FLHealth CHARTS. Cases with unknown race or ethnicity are excluded. Rates are remaining stable for most race and ethnicities, but **rates continue to remain highest among Hispanics.**

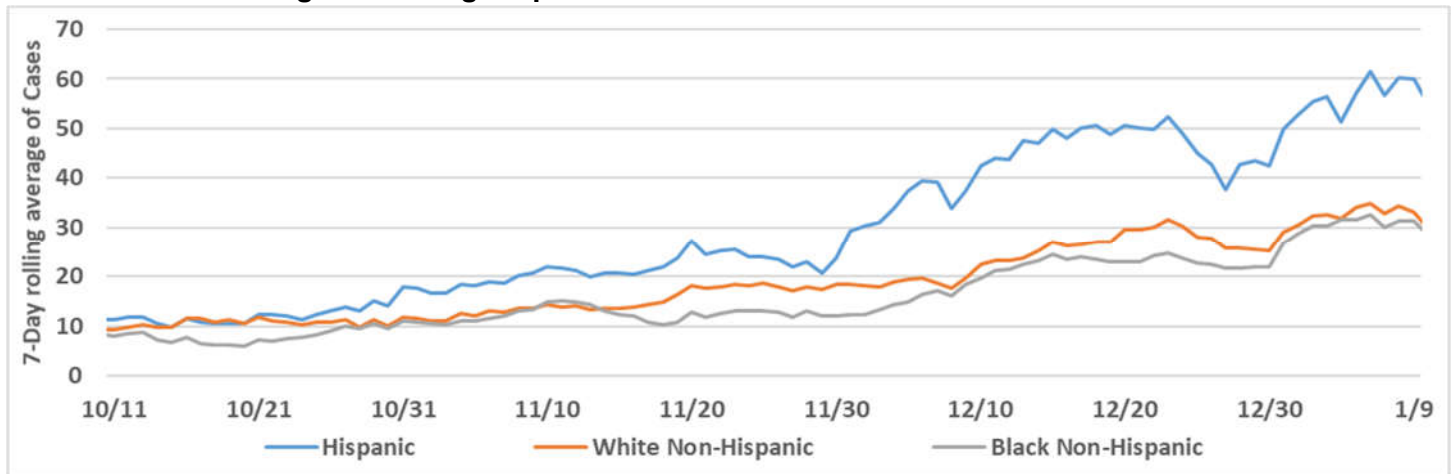


Fig 5. COVID 7-day average case rates per 100,000 population by age group for the past 90 days in Hillsborough County. **Rates across all age groups increased this past week. Case rate were highest in the 25-34, 35-44, and 45-54 age groups.**

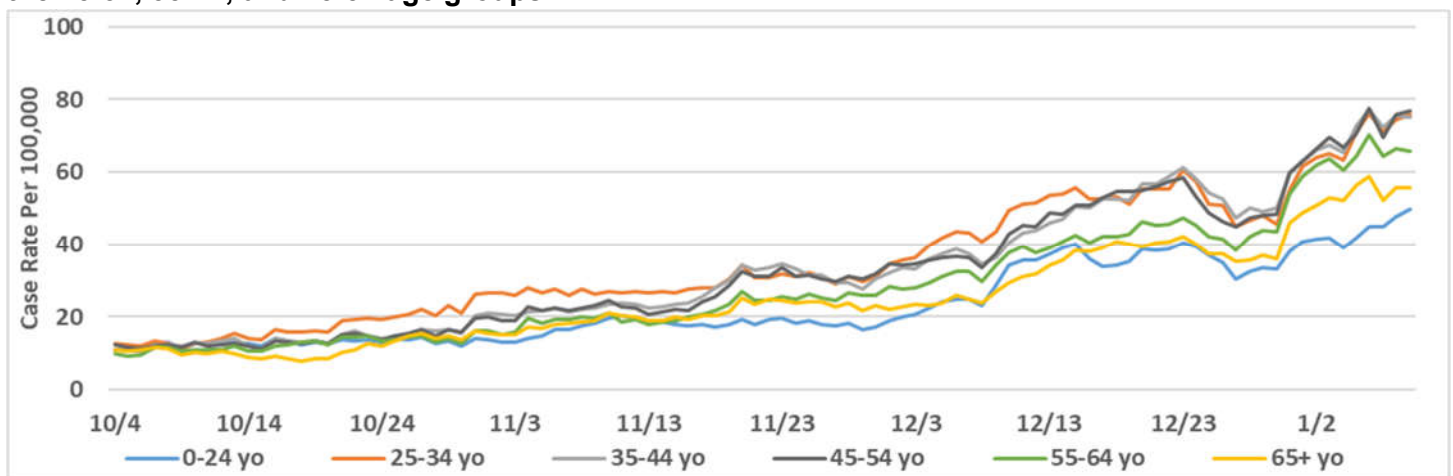


Fig 6. COVID pediatric and college-aged case rates per 100,000 population by age group, over the past 90 days in Hillsborough County. The 0-24 yo age group from Fig 5 (above), broken out into Preschool aged (0-4 yo), Elementary aged (5-10 yo), Middle/High School aged (11-17 yo) and College aged (18-24 yo). **Rates continue to remain highest in college aged cases, but all age groups increased during the past week.**

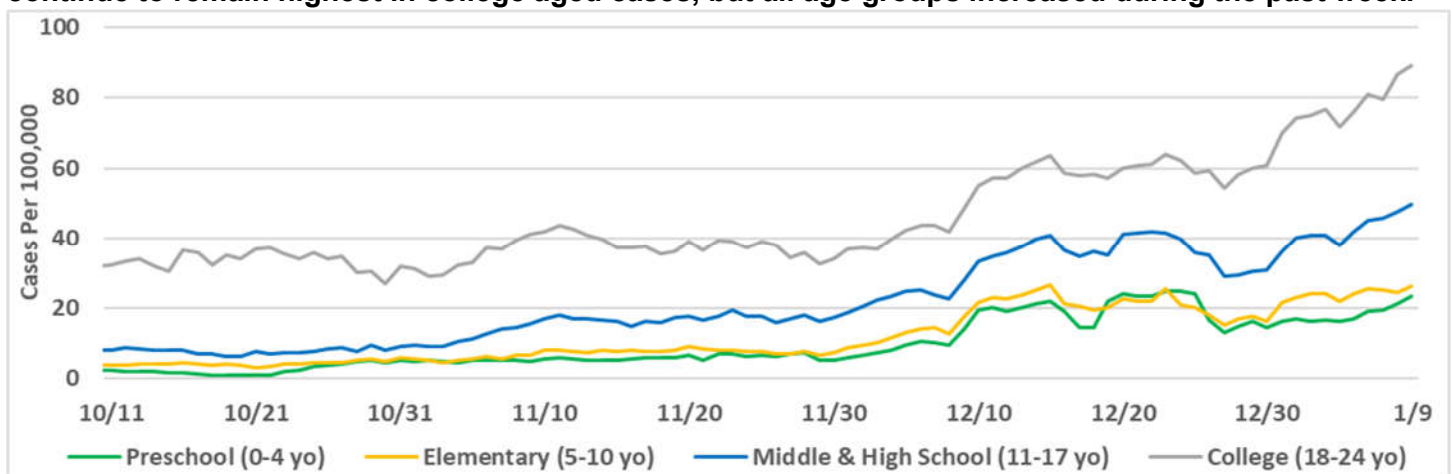


Fig 7. (right) Weekly reported COVID cases associated with **students and staff at K-12 schools** in Hillsborough County. COVID case must have been on campus during exposure period or infectious period to be counted. Public schools in Hillsborough County were closed for winter break for 2 weeks and the weekly total number of cases decreased during those weeks. Schools re-opened on January 4th, 2021 causing a spike in cases this past week. Most cases are associated with family gatherings, travel and extra-curricular activities.

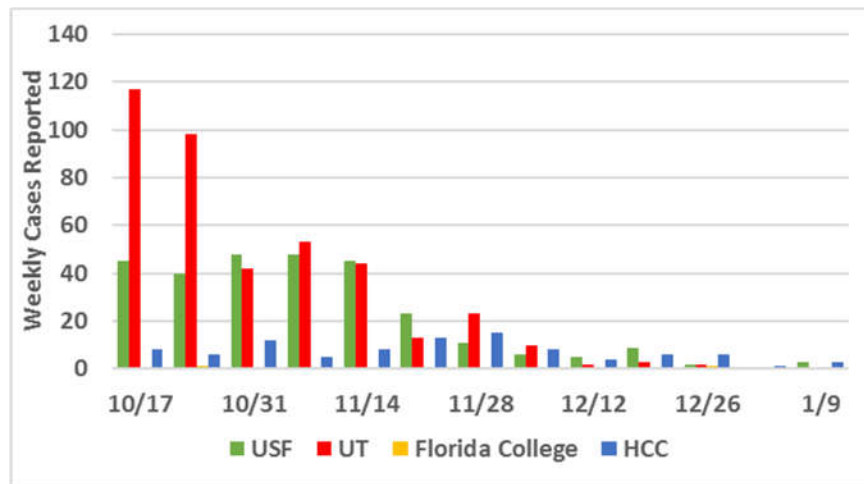
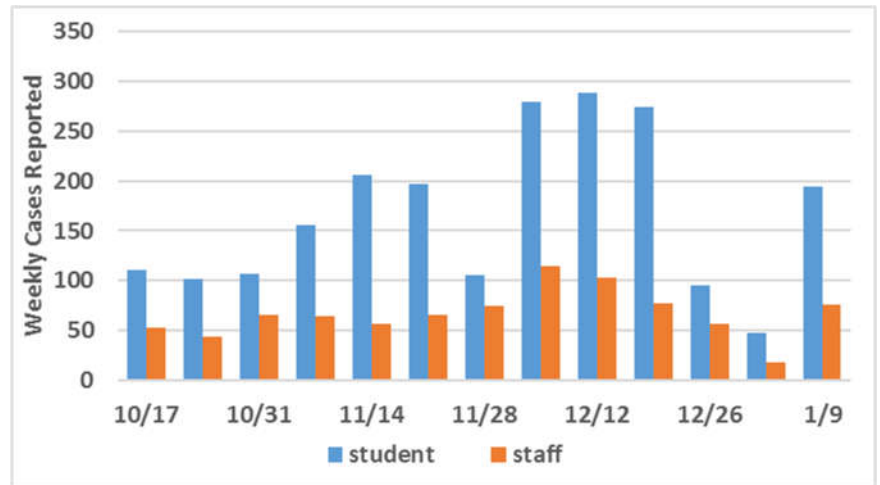


Fig 8. (left) Weekly reported COVID cases associated with **college students and staff** by reporting week. COVID case must have been on campus during exposure period or infectious period to be counted. Most college campuses were closed for winter break and will reopen this week. **Low numbers of total cases were identified this past week** as students just recently started slowly returning to campus.

Fig 9. Daily COVID cases associated with **LTCF residents and staff** for the past 90 days in Hillsborough County. COVID case must have been on LTCF site during the exposure period or infectious period to be counted. **Cases among residents increased this past week while cases amongst staff remained steady.**

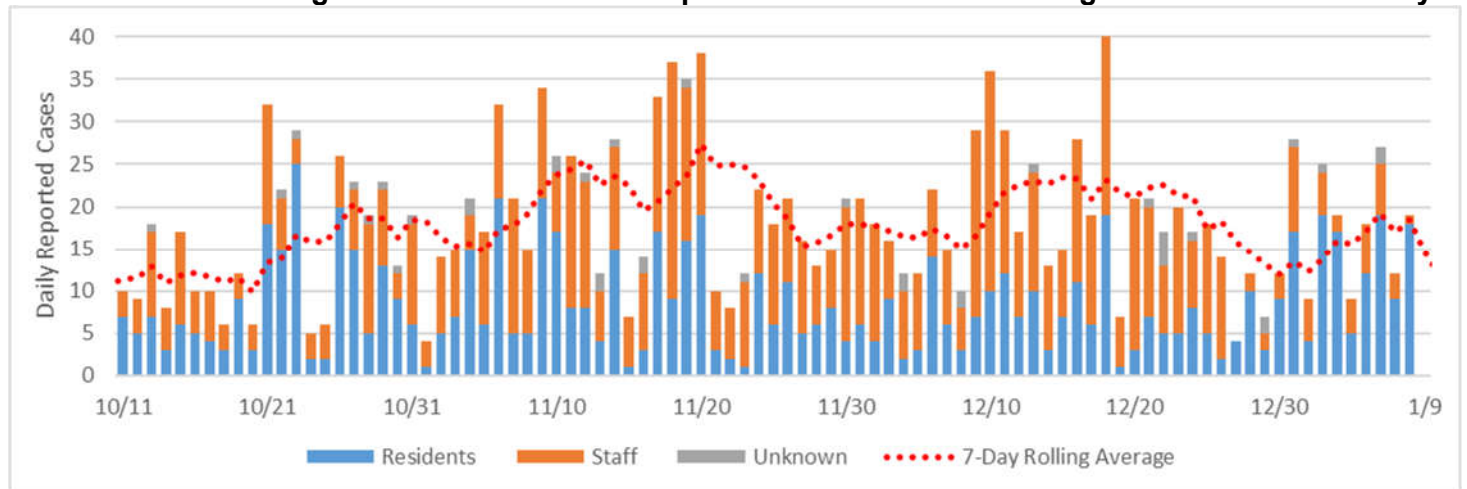
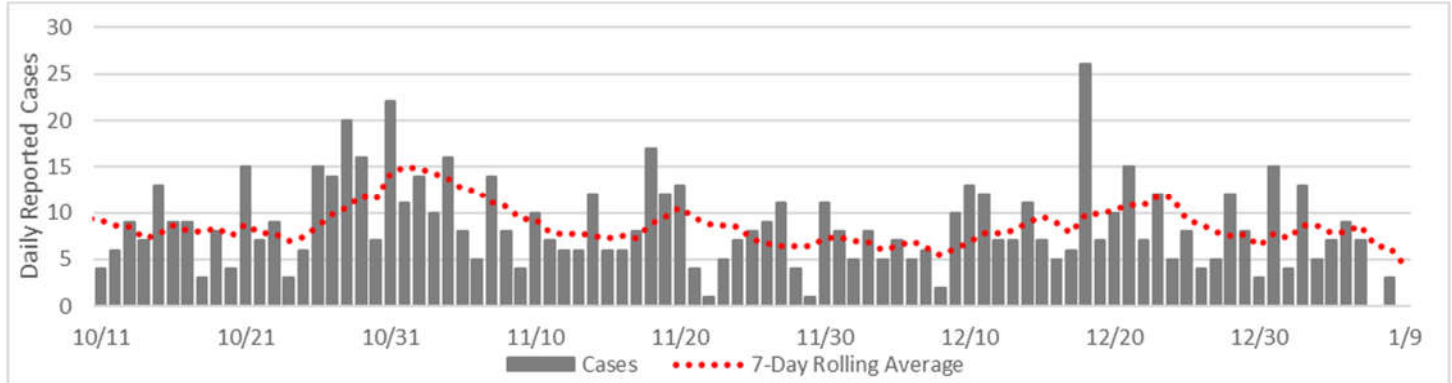


Fig. 10. COVID cases in **Health Care Workers (HCW)** for the past 90 days. To collect case occupation a case interview is required with the case, therefore the past week has missing/incomplete data, as case investigations are ongoing. Reported cases in HCWs are showing a slight decrease this past week but remain stable.



TESTING RATE, TURN-AROUND TIME AND PERCENT POSITIVITY

Fig 11. Reported COVID testing volume and rate for Hillsborough County residents for the past 90 days. Tests are not de-duplicated by person or day; therefore, one person can have multiple tests counted across multiple days. Antigen testing continues to remain stable in volume and **overall testing rate increased during the past week.**

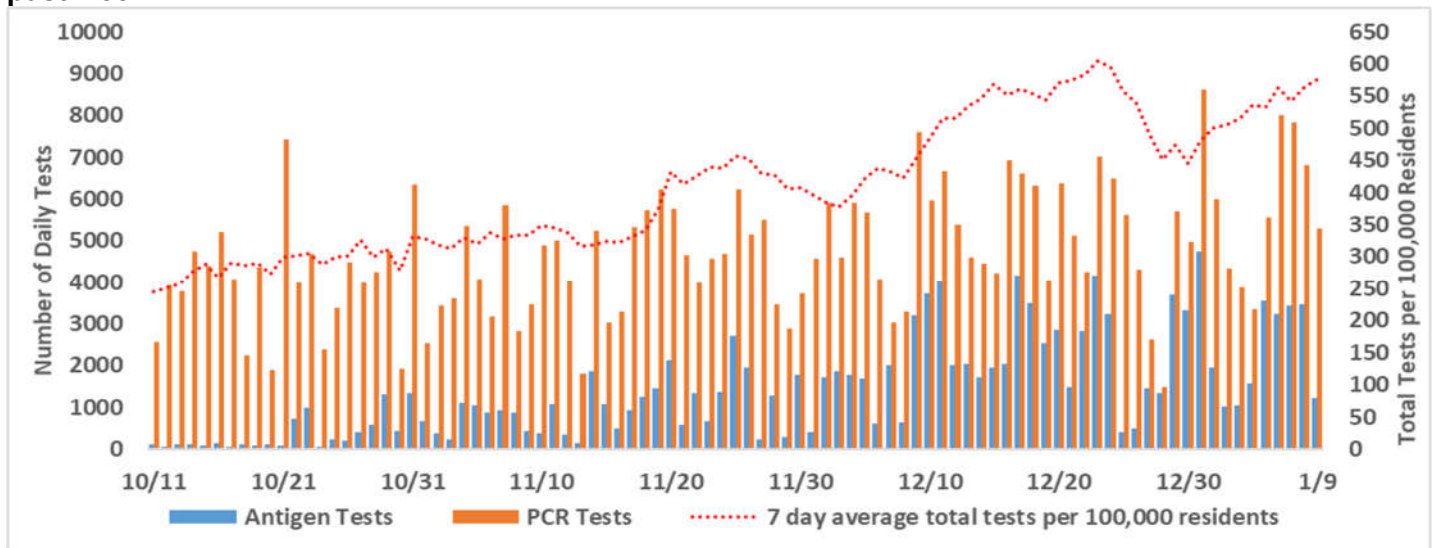


Fig 11B. Reported COVID 7-day average testing rate per 100,000 population for Pinellas, Pasco, and Hillsborough Counties and the State for the past 90 days. These counts are de-duplicated, where each person is only counted once per day, regardless of how many times they were tested. Testing rate increased slightly in all counties. Testing rate continues to be highest in Pinellas County, but all Tampa Bay Area counties are below the state testing rate.

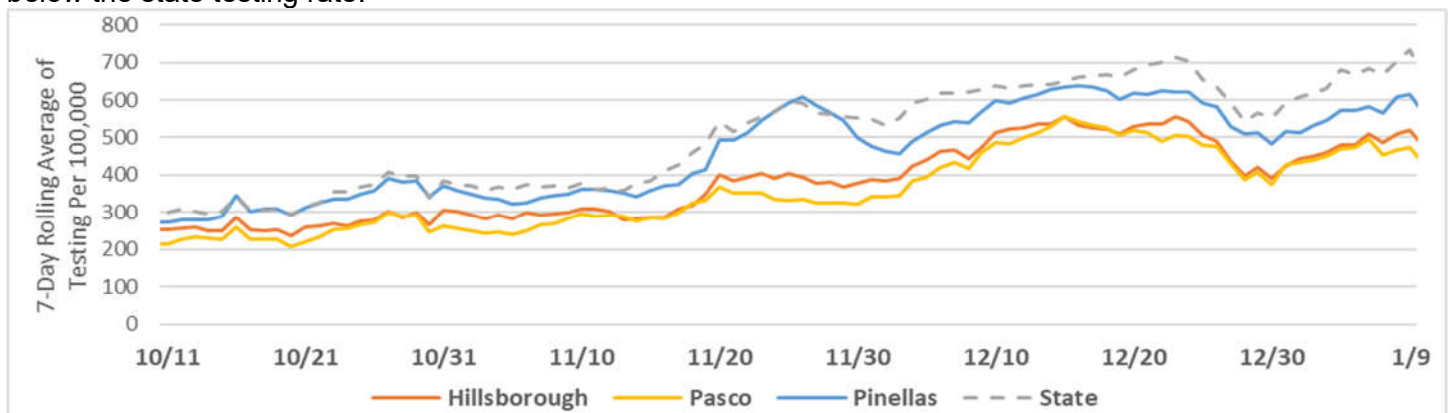


Fig 12. Average COVID testing turn-around-time (TAT) from specimen collection until results reported to DOH for the past 90 days. We are seeing delays in the turnaround time for the reporting of antigen testing results from a few facilities. When these results are filtered out of the analysis for the past month (dashed line), average TAT for antigen tests is generally less than one day. **PCR test average TAT remains around 2 days.**

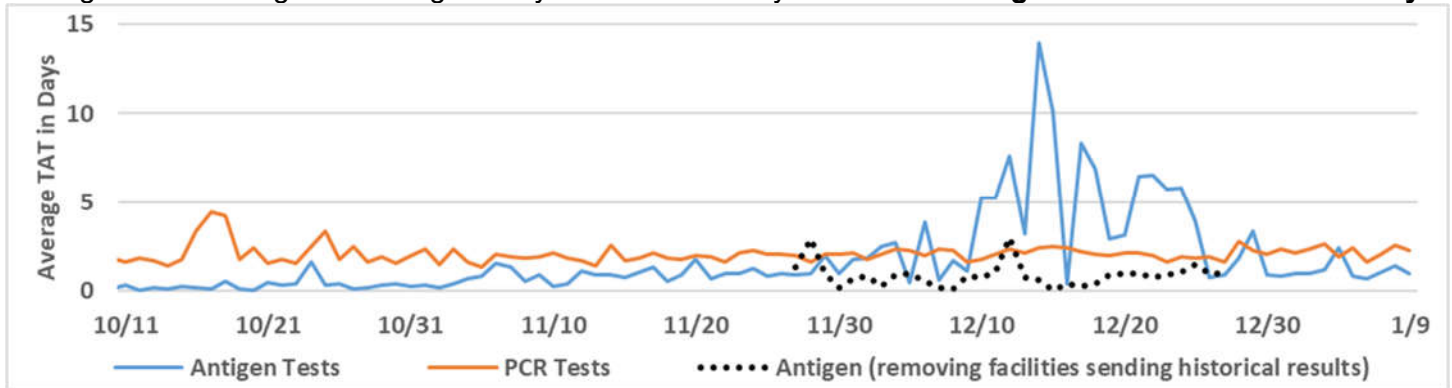


Fig 13. COVID testing percent positivity by age group for the past 90 days on a weekly average, based on Merlin case and lab data for Hillsborough County. Percent positivity was calculated by the date a lab was created that week for a positive COVID case divided by the total number of people tested that week. Decreasing percent positivity is indicating that fewer people tested positive, therefore the lower the percent positivity value the better, which is represented in green. Higher percent positivity values are represented in red. **Percent positivity is high across every age group, but the highest positivity was in the 5-14 age group.**

	10/10	10/17	10/24	10/31	11/7	11/14	11/21	11/28	12/5	12/12	12/19	12/26	1/2	1/9
0-4 years	3.2%	1.9%	2.8%	5.5%	5.7%	5.5%	4.1%	6.9%	6.9%	6.6%	8.1%	9.0%	9.9%	13.4%
5-14 years	6.0%	6.5%	6.8%	8.0%	8.2%	10.4%	7.9%	8.5%	9.2%	9.0%	9.3%	11.8%	17.1%	17.7%
15-24 years	10.1%	10.3%	9.7%	8.8%	10.6%	12.2%	8.7%	7.6%	8.4%	9.5%	10.3%	10.6%	14.9%	14.2%
25-34 years	4.9%	5.9%	6.6%	7.7%	8.0%	8.8%	7.8%	6.8%	8.4%	9.0%	9.4%	8.4%	12.7%	13.7%
35-44 years	4.9%	5.5%	5.5%	6.9%	7.5%	8.4%	8.7%	7.8%	8.5%	8.5%	10.0%	10.5%	14.6%	14.6%
45-54 years	4.9%	5.0%	5.4%	6.7%	7.7%	7.8%	8.6%	8.7%	8.6%	9.2%	11.4%	10.4%	15.1%	15.5%
55-64 years	4.0%	4.4%	4.7%	5.0%	6.3%	6.3%	6.0%	7.0%	7.1%	7.6%	9.0%	9.3%	14.2%	13.3%
65-74 years	3.8%	3.1%	4.4%	4.3%	5.9%	5.9%	5.6%	7.1%	6.0%	7.1%	9.0%	9.6%	13.8%	11.7%
75-84 years	3.7%	2.7%	3.5%	4.5%	6.5%	6.8%	5.9%	6.9%	5.8%	6.4%	8.2%	9.0%	12.7%	11.8%
85+ years	2.3%	3.4%	4.8%	4.2%	5.1%	5.0%	2.9%	3.6%	2.9%	4.8%	5.8%	5.7%	8.6%	8.8%

Fig 13B. COVID testing rate by age group, per 100,000 population for the past 90 days on a weekly average, based on Merlin lab data for Hillsborough County. Testing rates indicate how many people in that specific age group for Hillsborough County are being tested to identify cases within the community. The higher the testing rate the better, indicated in green. The lower the testing rate is indicated in red. **Testing rate increased across all age groups. Rates are highest in the 85+ age group, and lowest in the 0-4 age groups.**

	10/10	10/17	10/24	10/31	11/7	11/14	11/21	11/28	12/5	12/12	12/19	12/26	1/2	1/9
0-4 years	76	66	85	94	95	93	124	106	136	289	277	185	164	173
5-14 years	84	74	81	90	96	95	137	122	175	288	256	209	168	386
15-24 years	250	266	270	284	291	276	355	414	458	553	513	504	445	557
25-34 years	263	270	292	339	325	308	394	460	498	566	548	668	562	623
35-44 years	258	245	257	293	285	271	375	375	440	519	521	510	464	527
45-54 years	264	259	257	294	283	275	363	356	425	487	474	449	440	497
55-64 years	278	281	288	324	302	298	404	379	429	492	476	441	435	498
65-74 years	265	242	262	334	275	270	379	332	371	435	432	361	352	437
75-84 years	303	282	300	418	322	321	465	385	452	484	491	423	410	511
85+ years	397	420	398	494	426	537	856	562	815	833	760	796	644	783

HOSPITALIZATIONS AND HOSPITALIZATION RATE

Fig 14. COVID admits and inpatients in Non-ICU and ICU beds in Hillsborough County, based on the AHCA ESS Report. Hillsborough County hospitalizations for COVID continue to increase, surpassed the summer peak (440), and are now averaging 462 total COVID inpatients a day. **Hospitalizations are up 16% from last week.** Daily COVID admits have averaged 59 per day this past week.

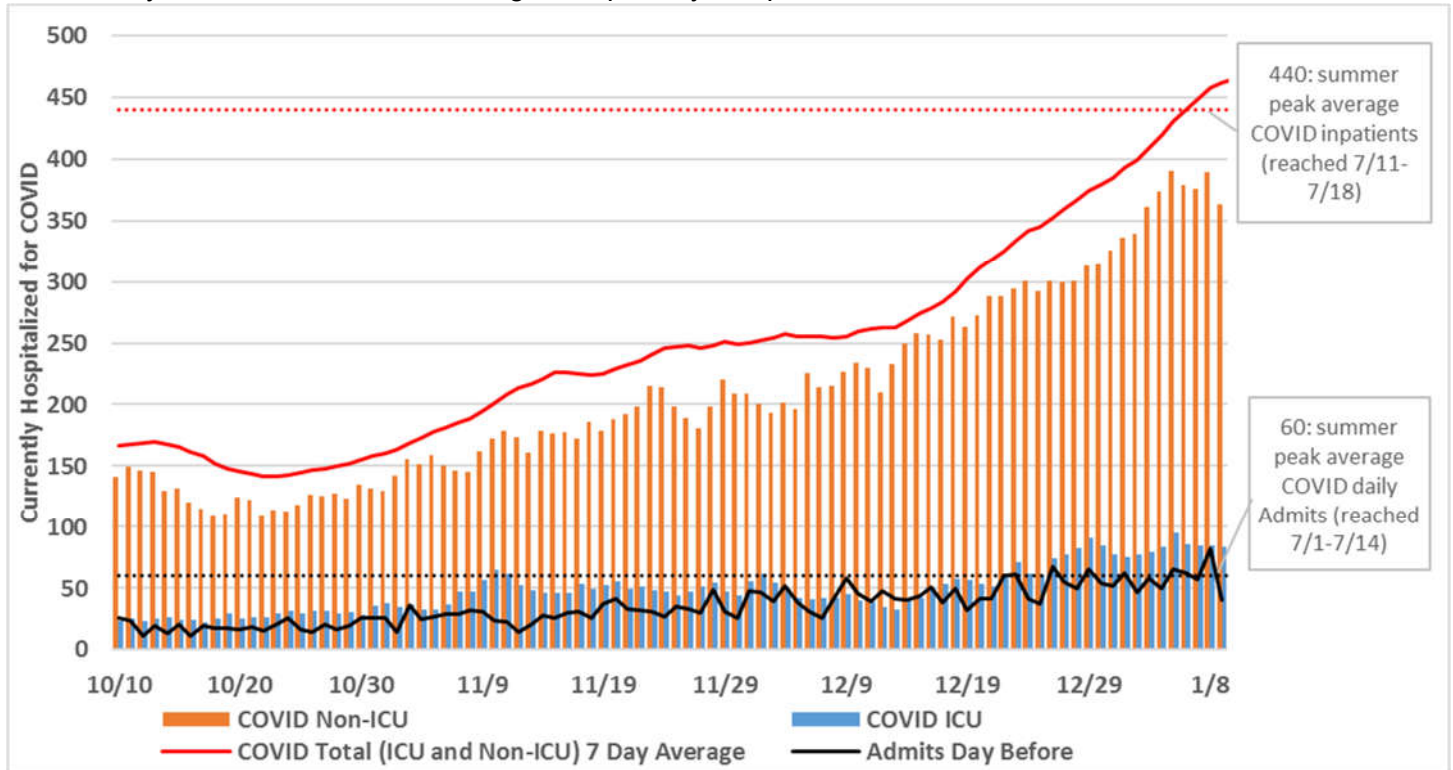


Fig 15. Percentage of Hospital and ICU beds occupied in Hillsborough County, based on AHCA ESS Report. Occupied beds increased to 83% for ICU beds and around 74% in Non-ICU beds.

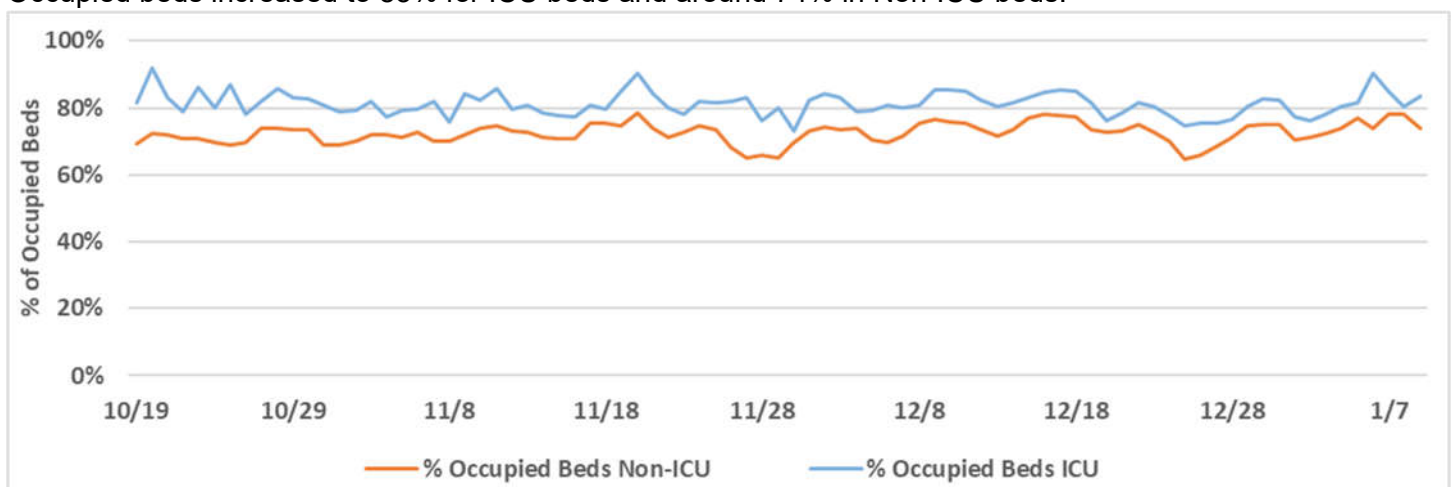


Fig 16. COVID Hospitalization rate per 100,000 by Race/ethnicity, over the past 90 days, based on Merlin case data. Cases with unknown race/ethnicity are excluded. Population data was acquired from FLHealth CHARTS. To collect case hospitalization a case investigation and/or interview is required with the case, therefore the past week has missing/incomplete data as case investigations are ongoing. Over the past week, **hospitalization rates were highest in Black Non-Hispanic cases.**

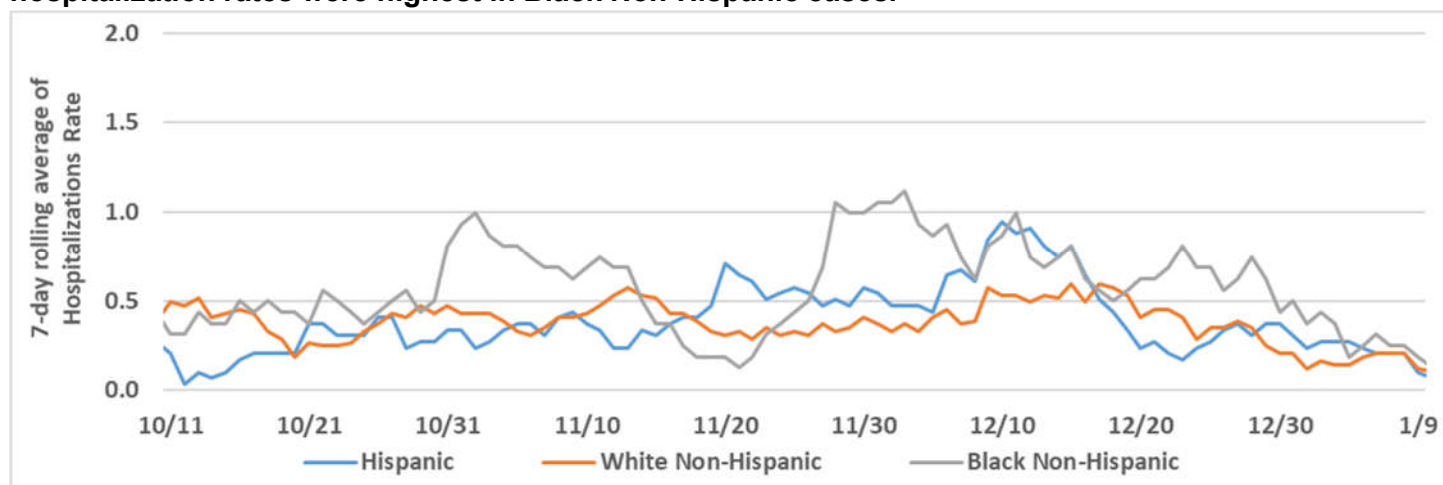
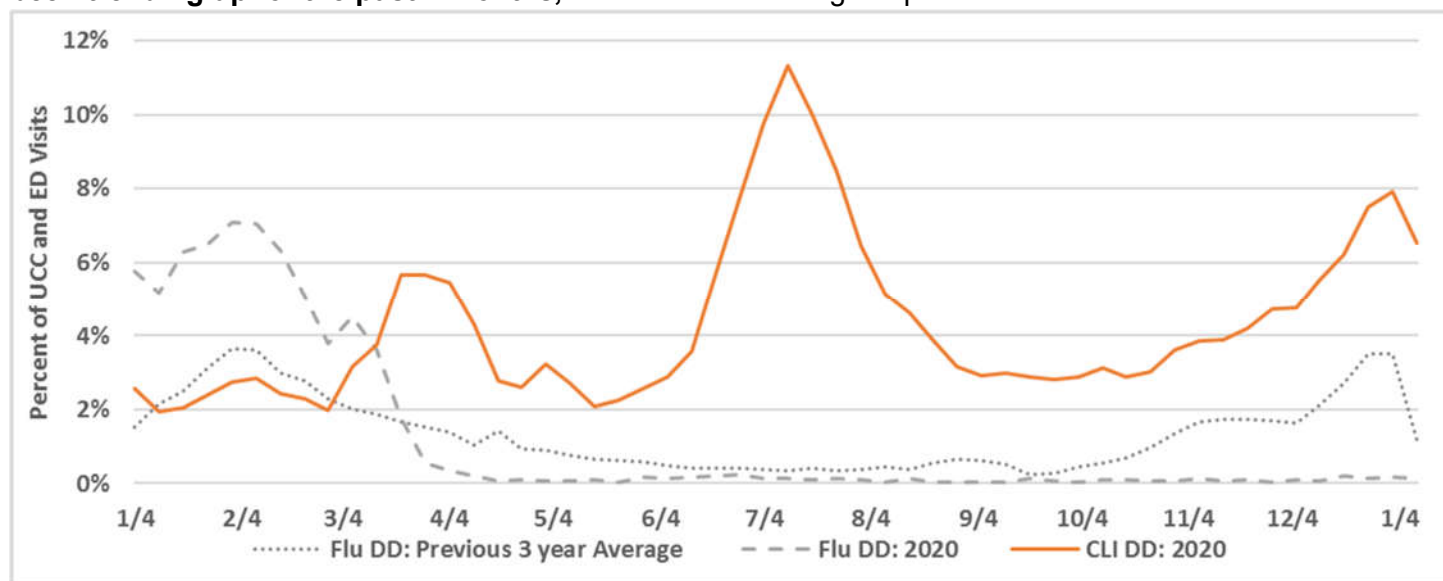


Fig 17. Percentage of Urgent Care Center (UCC), Hospital, and Emergency Department (ED) visits with a discharge diagnosis (DD) for influenza (flu) or COVID-like illness (CLI) in Hillsborough County, based on FL-ESSENCE reporting facilities, by reporting week. As additional DD data is received, the previous weeks could change in value. Visits remain well below the historical values for flu. **The percentage of visits for CLI have been trending up for the past 2 months, but decreased during the past week.**



DEATHS AND DEATH RATES

Important Note: COVID deaths are reported to DOH from a variety of sources including hospitals, Medical Examiners Offices and from the Vital Statistics database. The Vital Statistics Database Data is reported electronically and can have delays of 2-4 weeks from the date of death until the date reported. Data during this time frame should be assumed to be incomplete and is indicated by the shaded area in each graph below.

Fig 18. Daily COVID deaths reported by date of death over the past 90 days, based on Merlin case data and Vital Statistics Death data. Over the past 90 days, reported COVID deaths have averaged between 2-5 per day, **deaths are trending slightly upward, and could further increase due to delays in reporting.**

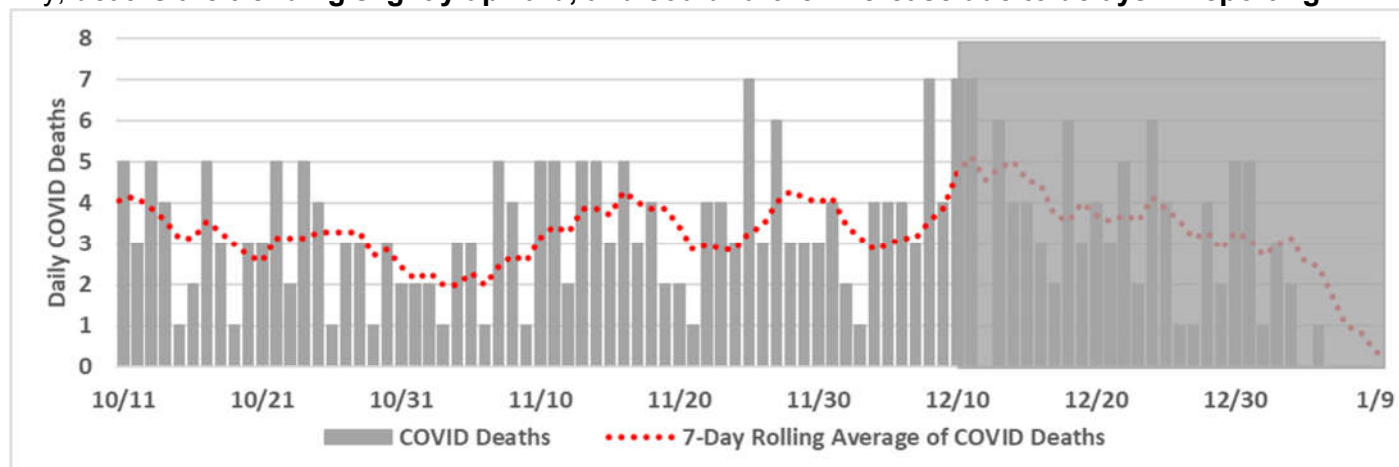


Fig 19. COVID 7-day rolling average death rate per 100,000 by race/ethnicity, for the past 90 days, based on Merlin case data and Vital Statistics Death data. Population data was acquired from FLHealth CHARTS. Cases with unknown race/ethnicity are excluded. Over the past 90 days, **death rates have been stable across all race/ethnicities, but could change due to delays in reporting.**

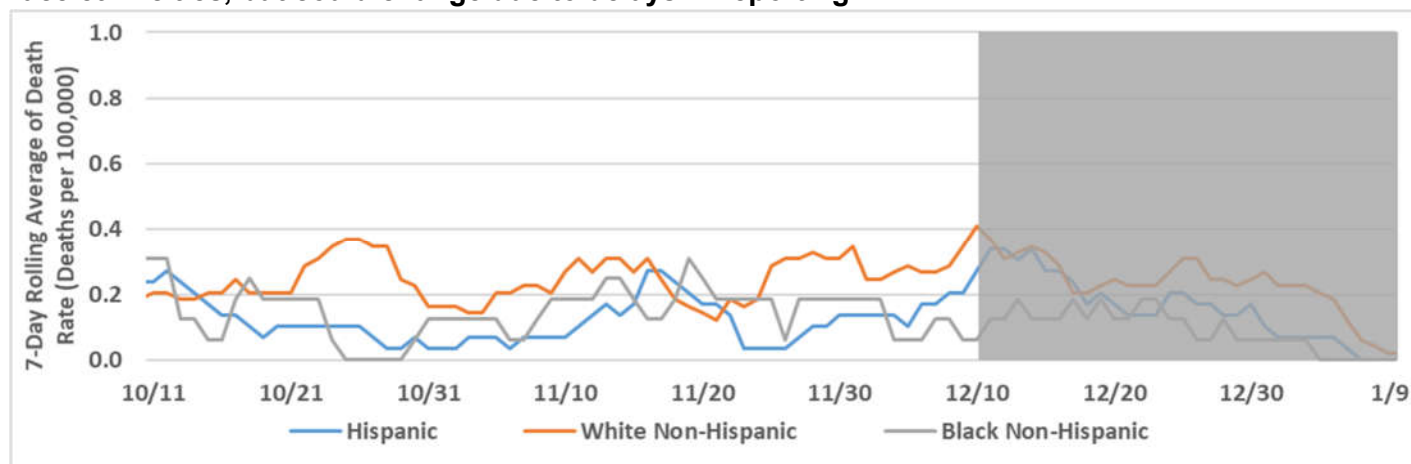


Fig 20. COVID Deaths associated with LTCFs as a percentage of all deaths, over the past 90 days, based on Merlin Data and Vital Statistics Death data. To date, 457 of the 1,121 (41%) COVID deaths in Hillsborough County were associated with LTCFs. Recently, LTCF associated deaths have accounted for about 1 death/day.

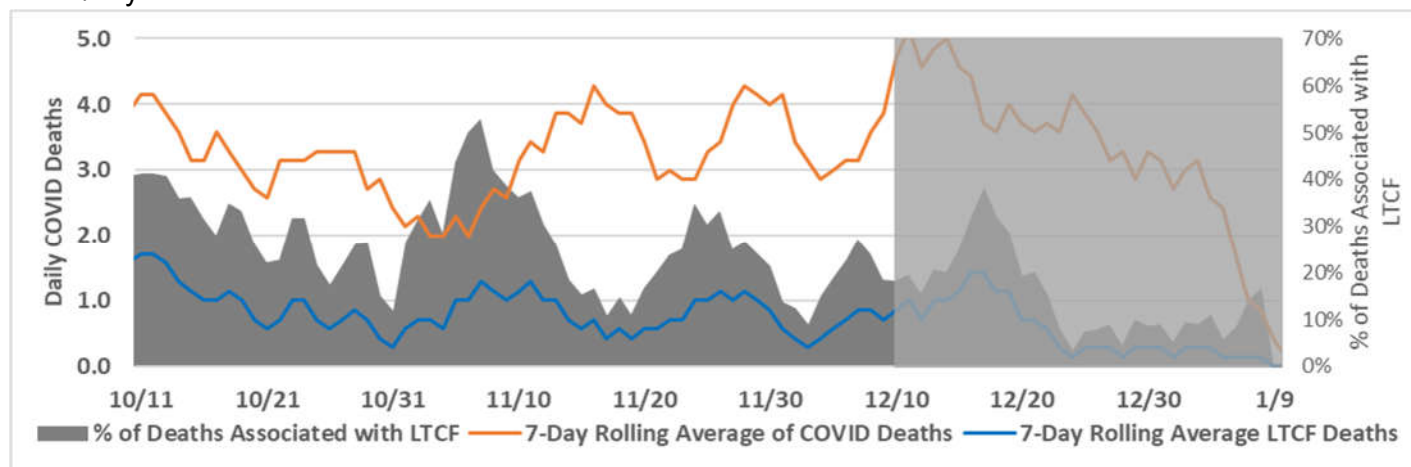


Fig 21. COVID cases, deaths, case fatality rate, and mortality rates by gender, age group and race/ethnicity in Hillsborough County.

Age Group	Cases	Deaths	Case Fatality Rate	Mortality rate per 100,000 population
0-4 years	1801	0	0.00%	0.00
5-14 years	4724	1	0.02%	0.55
15-24 years	15145	2	0.01%	1.09
25-34 years	16669	1	0.01%	0.45
35-44 years	13536	16	0.12%	8.13
45-54 years	13010	38	0.29%	19.78
55-64 years	9974	128	1.28%	73.67
65-74 years	5698	240	4.21%	194.88
75-84 years	3176	367	11.56%	617.01
85+ years	1606	328	20.42%	1374.17
Unknown	445	0	0.00%	
Race	Cases	Deaths	Case Fatality Rate	Mortality rate per 100,000 population
White	38365	745	1.94%	69.40
Black	10318	174	1.69%	67.47
Other	13674	156	1.14%	137.08
Unknown	23427	46	0.20%	
Total	85784	1121	1.31%	77.56
Ethnicity	Cases	Deaths	Case Fatality Rate	Mortality rate per 100,000 population
Hispanic	24142	253	1.05%	59.87
Non-Hispanic	34962	704	2.01%	68.84
Unknown	26680	164	0.61%	
Total	85784	1121	1.31%	77.56

VACCINATIONS

Fig 22. COVID-19 vaccines administered Statewide and in Hillsborough County. Numbers represent the number of people vaccinated. Categories are exclusive and a person has either received “first dose” or has “series complete”. Data as of 1/9/2021.

Statewide COVID-19 Vaccinations		558,326	Hillsborough County COVID-19 Vaccinations		26,777
First Dose		519,917	First Dose		22,908
Series Complete		38,409	Series Complete		3,869

Fig 23. COVID vaccine doses administered in Hillsborough County by week, based on State published vaccination report. At this time, we do not have access to demographic data – including age, race/ethnicity, and address - at the County level on individuals being vaccinated. Therefore, the “Estimated % of County Vaccinated” is calculated based on all vaccines administered in Hillsborough County (numerator) and population of Hillsborough County (denominator). **11,884 vaccines were administered in Hillsborough county during this past week.**

Week End Date	Weekly Vaccines Administered	Total People Vaccinated (Cumulative)	Estimated % of County Vaccinated
12/19/2020	4430	4430	0.3%
12/26/2020	4736	9166	0.6%
1/2/2021	5727	14893	1.0%
1/9/2021	11884	26777	1.9%

Additional COVID surveillance data, visualizations and information can be found at the links below:

- Florida Department of Health Statewide COVID Dashboard: <https://experience.arcgis.com/experience/96dd742462124fa0b38ddedb9b25e429/>
- Hillsborough County COVID Dashboard: <https://www.hillsboroughcounty.org/en/residents/public-safety/emergency-management/stay-safe/covid-19-dashboard>
- Hillsborough County School District Dashboard: <https://hillsboroughschools.org/doc/2744/school-reopening-plan/frequently-asked-questions/coviddash/>

Additional notes about data sources and data collection for the charts and tables used in this report:

Merlin reportable disease database: Merlin serves as the state's repository of reportable disease case reports, including automated notification of staff about individual cases of high-priority diseases. Access to Merlin is available only to approved Department of Health employees. COVID data is entered in Merlin in multiple ways. Data fields associated with Electronic Lab Reports (ELRs) or electronic case reports will be auto populated when available. Additionally, specific to COVID cases, the Healthy Together APP allows for individuals to complete and report demographics, symptomology and other data elements to DOH. Case investigators and contact tracers also make attempts to interview each COVID case to collect or verify demographics and other important public health data. As the data is collected from case investigations the Merlin database will be updated. Some data elements, such as deaths and group care associations (Jails, LTCFs, and Schools) are reviewed by local and state staff for accuracy. Data within Merlin is considered provisional and is subject to change.

AHCA ESS Report: Florida's Agency for Health Care Administration (AHCA) requires all licensees providing residential or inpatient services to use the Emergency Status System (ESS) database for reporting its emergency status, planning or operations. In response to COVID the Agency added new reporting requirements related to COVID cases and hospitalizations at AHCA licensed facilities.

ESSENCE-FL: The Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) is a biosurveillance system that collects emergency department chief complaint data from participating hospitals and urgent care centers in Florida, call data from the Florida Poison Information Center Network, reportable disease data from the Merlin database, and mortality data from the Florida Office of Vital Statistics. The objective of this surveillance system is to provide the epidemiologist with the data sources and analytic tools needed to identify outbreaks or unusual trends more rapidly, leading to a timelier public health response.

FLSHOTS: Florida SHOTS is a free, statewide, centralized online immunization information system that helps healthcare providers and schools keep track of immunization records to ensure that patients of all ages receive the vaccinations needed to protect them from dangerous vaccine-preventable diseases. FLSHOTS is a program of the Florida Health Immunization Section and is supported by the Centers for Disease Control and Prevention.

Vital Statistics: The Florida Department of Health, Bureau of Vital Statistics manages the official database and records for deaths in the State of Florida. When a death occurs, the cause of death and medical certification is completed by a medical certifier, which includes physicians, medical examiners and autonomous advanced practice registered nurses. As these medical certifications occur, data and records are managed and stored within the Vital Statistics database.

FLHealth CHARTS: Powered by Florida's Bureaus of Community Health Assessment and Vital Statistics. CHARTS stands for Community Health Assessment Resource Tool Set, and compiles multiple datasets from a variety of agencies into a single source. Several data sources include Agency for Health Care Administration (AHCA), Florida Department of Health, Florida Department of Elder Affairs, Florida Department of Law Enforcement, and many others. A complete list of data sources can be found at <http://www.flhealthcharts.com/Charts/documents/training/DataSources.pdf> Data queries such as population estimates, birth rates, death rates, marriage rates, and reportable disease statistics can be found using this tool.